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MUCO-MEMBRANOUS COLITIS.

Under this title I propose to consider a morbid condition, which has for its essential outward manifestation the discharge per annum of mucus in the form of membranes, casts, tubules &c., or as a glairy jelly like substance.^a Along with this, which I consider the one symptom, without which a diagnosis of the complaint cannot be made, there are two others, which in well marked cases are almost invariably present, viz., abdominal pain of a colicky type and constipation.

The occurrence of the above stated phenomena has long been recognised, but it is within the last twenty years that the condition has received much attention from physicians as a definite disorder of the colon.

There does not appear to be any definite geographical limitation of the disease. American writers have put numerous cases on record; on the Continent of Europe it has received probably more attention than in Great Britain, and there is plenty of evidence that it is to be met with in tropical countries. A most typical case--of which I propose to give notes later--was that of a gentleman who returned from India suffering from the disease.

Both sexes are affected, but statistics show that

the female is more liable than the male.

Age. The great majority of cases are seen in persons between the ages of 25 and 45 years, but it may occur at all ages.

As regards occupation, I do not think there can be any doubt that persons who lead a sedentary life are most liable to attack. My own observations point to women who are engaged in clerical work in offices as those most often affected. In large towns where a considerable number of women are engaged as clerks, typists, telephone operators &c., one frequently encounters this complaint. Moreover it is likely to become more prevalent in view of the ever increasing number of females now earning their living in such occupations.

ETIOLOGY.

Many diverse views have been expressed by different writers as to the origin of the complaint. Like a similar condition in other mucous membranes the catarrh implies the action of an irritant, but there is still much difference of opinion as to the nature of the irritant, for it has been variously considered as mechanical, (constipation) chemical, (uric acid) or bacterial. Others again regard it as purely the result of a constitutional condition, which they term the "Neuro-arthritis" diathesis, ^{as} ~~as~~ in

all other maladies the causes are either predisposing or exciting, and it is only by careful analysis not only of the symptoms presented by a sufferer, but also of his or her family and personal history, that a clue to the etiology can be secured. The family and personal history in these cases will be found in a distinct majority, in fact in my opinion in nearly all of them, to show strong rheumatic or gouty tendencies, especially gouty. In all the cases save one, that have come under my own notice there was a clear history of "arthritic" tendencies.

The exception was a man who frequently suffered from malaria in India. This predisposition of persons of a gouty diathesis to the complaint is fully recognised by most writers on the subject.

Langenhagen (Muco-membranous Entero-Colitis chap. 1) ^{page 1.}
^{important}
 calls it one of the most ~~frequent~~ manifestations of the "~~Neuro~~-arthritic" diathesis. Hemmeter quotes Garrod and Duckworth to support his view that the so called uric acid constitutes a potent factor in the production of the disease. (See his work on diseases of the intestines Vol. 1. p. 490). He states "that he has found excess of uric acid in the stools," and that "even if uric acid is not the cause, it may be regarded as the exponent of a large number of other toxins" & ^{Let} "The passage of these

substances through the intestinal walls give rise to hyper-secretion and irritation."

Alexander Haig sees in Colon Catarrh only another point for the moral, which he expounds in his work "Uric acid as a factor in the production of disease." The theory of production which he has built up is a most interesting and ingenious one. Starting with his general contention that defective elimination of purins and xanthins taken as food brings about a storage of uric acid in the system, he goes on to say that a time comes when the blood temporarily becomes more alkaline than usual. This state may be brought about by chronic dyspepsia, or by a fever or Influenza. Uric acid is now dissolved out of the tissues, and floods the blood, moreover he says it is in a colloid form, and this plastic material blocks up the capillaries. The secretions of the body are dried up, saliva, gastric juice, intestinal juice. Digestion is at a standstill, and the food becomes an irritant, hence mucus is thrown out in excess to protect the membrane. Such a state of affairs he calls Collaemia or a uric acid storm, which may pass off without further result when the blood again becomes less alkaline, and the acid is withdrawn from it by precipitation in the fibrous tissues, but should a precipitation of it

occur in the intestinal wall it acts as an irritant, causes spasm, excessive secretion of mucus, and pain followed by constipation. The latter in turn by causing stasis of the intestinal contents leads to absorption of water from the mucus, and hence the tough membranes. Moreover anything which would cause diminished alkalinity of the contents of the bowel, would cause precipitation of mucin, & uric acid would act in this way. Without accepting the author's views on diet, and admitting that this "colloid" condition of the uric acid is quite unproved, I believe that the latter part of the theory is probably the correct one as regards the production of acute ^{or} ~~accasional~~ attacks of catarrh in gouty persons, and, as I have already said, the case histories of these people show that the great majority of them are gouty or rheumatic.

How then is the chronic state produced? Now it is, I beleive, that a long train of secondary causes come into action. Of these constipation is one of the most important. It is probab~~le~~^{ly} at the first due to a spasm of the inflamed bowel, or rather of that piece of bowel of which the mucous membrane is in a state of catarrhal inflammation: it is, in other words "Spastic" in type, and it keeps up the irritation not only by causing retention of

irritating particles, hardened faeces &c., in contact with the bowel lining, but also by the fact that purgatives are given for its relief, which also irritate the mucous membrane. Chronic constipation, however, is not a primary cause, for it is one of the commonest disorders, especially amongst young women, with which a medical practitioner has to deal, whilst Muco-membranous Catarrh is a comparatively rare disease. Moreover cases are met in which this symptom is never present. Another secondary cause is chronic dyspepsia. Careful enquiry will, in a great many cases elicit a history like the following:- Indigestion, as the result of which a more and more rigid diet^y is adopted, till finally it chiefly consists of animal food and bread. Fluids also are found to be taken in greatly reduced quantities. Such sufferers are often found to have dilated stomachs, not as a rule to an advanced degree, but sufficient to keep up the dyspepsia, and to be complicated by constipation. They tend to become ill nourished, to have neurasthenia, and after a more or less prolonged period the full symptoms of catarrh are developed viz., by passage of mucus, pain & constipation.

NEURASTHENIA.

It is difficult to gauge the exact influence which

Neurasthenia exerts in this complaint, whether it is a cause, or whether it is merely a sequel can only be decided by a careful study of the case history.

That it is present in a variable degree in the great majority of cases is absolutely certain. My own investigations predispose me to the opinion that it precedes in most instances the actual onset of the catarrhal condition of the intestines. That Neurasthenia alone can originate a colitis is not probable when one considers the great number of people who *with out any such result* suffer from it and allied nervous disorders. Some other factor has to be added, such as gout or the introduction of micro-organisms.

That inflammation of the mucous membrane of the colon, the result of acute dysenteric colitis is followed in some cases by Muco-membranous Catarrh, has been recognised for a long time. It was observed amongst the soldiers who fought in the American Civil War (See Hemmeter, Diseases of the Alimentary System Vol. 1.). I have been told by a surgeon who served in the South African War that the usual symptoms of this complaint followed in a small proportion of those who had suffered from dysentery. It is only what one would expect that when the mucous membrane of the bowel remained in a chronic state of irritation

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NEURASTHENIA.

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ditions, which are also favourable to the development of Colon Catarrh.

That uterine and ovarian diseases are not primary causes becomes evident when we consider the large number of men affected, and also that the disease is not unknown amongst children under the age of puberty.

Briefly then we may conclude that Catarrh of the Intestines is in the majority of cases associated with the "uric acid" diathesis, the chief exciting cause of it being in such cases, constipation, neurasthenia, chronic dyspepsia, and cold.

Bacteria also may be factors in its production, particularly when following on true Dysentery and malaria.

PATHOLOGY.

Two diametrically opposed theories of the pathology are held, for whilst one school holds that the disease is compatible with a mucous membrane, which exhibits none of the signs of inflammation, another maintains that membranous colitis cannot occur unless there is inflammation, and even solution of continuity of the intestinal lining. It will be seen that clinically the disease may take two forms, to which Nothnagel gave the names respectively of Mucous Colic (Colica Mucosa) & Membranous Enteritis

and it might be thought that these clinical manifestations coincide with separate and definite pathological conditions of the intestine, but this view cannot be established because cases present themselves in which the clinical distinction is not maintained, the 1st type being merged in the 2nd.

Catarrh of the Colon being seldom fatal, the material for post-mortem evidence is not plentiful, *Autopsies have thus been made chiefly* ~~chiefly to have been~~ on persons dying from some concurrent malady. Failing, however, a study of the morbid histological appearances, the pathology of the disease may be considered by analysis of the physical signs and symptoms found during life, by comparison with similar manifestations in the mucous membrane of other parts, and by chemical and microscopic examination of the excreta from the bowels. Hemmeter (Diseases of the Intestines Vol. 1.p. 492) gives details of six cases studied histologically, all of which had in life presented typical clinical pictures of the disease. Of these, four cases were observed by himself, one he quotes from O. Rothmann, and one from M. Rothmann. Of his own cases he states that in two of them he was unable to trace the least microscopic evidence for the existence of an inflammatory state of the small intes-

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tine, or of the colon. In two others, however, there was quite ^{definite} ~~different~~ evidence of catarrhal colitis & enteritis. O. Rothmann's case died of acute peritonitis caused by a perforation of the duodenum. At the autopsy, a careful search was made throughout the entire length of the intestinal mucous membrane without any evidence being found of an inflammatory process in it. M. Rothmann's case was that of a woman who died of Carcinoma of the bones of the skull. She had suffered from obstinate constipation, which led to an irrigation of the colon being made, when large quantities of stringy masses of mucus and mucous-membranes were evacuated. At the autopsy the mucous membrane of the descending colon & sigmoid flexure were found to be intensely congested. Clinging to the lining, but readily separable were immense quantities of membranes. In some parts the lumen of the colon was entirely blocked by this material, and at these points it was quite free from faeces. Microscopic sections showed the mucous membrane to be in a state of true catarrh.

Von Noorden (*Membranous Catarrh of the Intestine* page 10) states that he has made a considerable number of observations proving that a true catarrhal enteritis exists in cases, which present the usual clinical picture. He does

not give details, but makes the assertion that

"These positive findings" are not, in his opinion of so much importance as the fact that "The disease picture of Muco-membranous Colitis may be observed in cases which reveal a perfectly healthy mucous membrane."

Dr. Hale White (Allbutts' System of Medicine Vol. 3. p. 945) records his experience of two autopsies. In the first he says the colon "was found to be considerably dilated, and its walls thin and atrophied, showing here and there patches of congestion. Otherwise all the viscera were healthy. Of the second case he merely records that "though membranes were passed shortly before death very few were found in the intestine", from which he infers that the mucus is passed soon after it is formed.

Post-mortem records have not, so far, been sufficiently numerous or definite to settle the question of the morbid anatomy; they are almost equally balanced as regards positive and negative findings.

Influenced by this Nothnagel inclined to the view that what he called Colica Mucosa occurred when the mucous membrane was undamaged, whilst Enteritis Membranacea corresponded to cases of inflamed mucous membrane. He maintains therefore, a dual pathology, and considers that "Colica Mucosa" is a Neurosis of Secretion. *[The view of Nothnagel is here obtained from von Noorden's Membranous Catarrh of the Intestines page 15.]*

To my mind the fact that distinct evidence of the inflammatory process has been established in quite half of the recorded "Sections" is much more important than all the negative results of the others. It gives this much certain ground viz., that a true catarrh of the bowel exists in some of the cases. It is equally certain that clinically individuals are met in which the attacks are separated by intervals of several months of good health, so in the absence of definite information to the contrary, it is reasonable to think that those whose mucous membranes were healthy when examined, were of this type, and that the mucous membrane had had time to become "apparently" healthy again, the patient, as already stated dying from a concurrent disease. When however, from any cause, the intervals become very short, or do not exist at all, then the mucous membrane becomes permanently damaged, just as a bronchial membrane does in chronic bronchitis.

When we come to seek for confirmation of this view by a comparison with the processes of a similar nature in other mucous membranes, I consider that we may get some information from the naso-pharynx. It is a fact that in Birmingham, at any rate, cases of Colon Catarrh frequently show evidence of post-nasal catarrh, & of gouty pharyngitis, so it is surely

fair to argue that if a gouty inflammation may occur at one part of the mucous membrane of the alimentary tract, a similar state may occur at another part of it. Again, there is a similarity in the pieces of inspissated mucus, which adhere to the membrane of the pharynx, and which are coughed up with difficulty, and in the masses of mucus, which are discharged per rectum with tenesmus.

Mention has already been made of the frequency with which uterine disorders occur in these cases. Chronic catarrhal Endo-cervitis^{ci}, & chronic Endometritis, are to be met with frequently, as is also the symptom^m dysmenorrhoea, and as these conditions are acknowledged to be^{frequently} of gouty origin, I think that when they occur together they are evidence that the colon condition may be also a gouty catarrh.

Membranous Bronchitis has been advanced as a similar process, the membranes being said to be composed of pure mucus, not of fibrin. I have never, however, seen a case of this kind.

Examination of the Excreta.

Both chemical and microscopic examinations show that the abnormal material passed in these cases is composed of mucus. It is found in the evacuations in several forms:-There may be quantities of amorphous, glairy or gelatinous substance, which is some-

times described as resembling frog spawn, or like thick mucilage of linseed, with which small particles of linseed are mingled. In other cases the mucus presents the character of tough cylindrical tubes varying in length from an inch or less up to several feet, and forming casts of the gut. They are of an opaque greyish or yellowish white. The most common condition, however, is that the mucus comes away as broken up shreds of membrane, or as stringy pieces or flocculent balls, which adhere or are spread out over the faeces. They may come away mingled with the ordinary discharges of the bowels, or nothing but the mucus may be passed at one time. It is rare to find thick mucilage of linseed, with which small particles of linseed are mingled. In other cases the mucus presents the character of tough cylindrical tubes varying in length from an inch or less up to several feet, and forming casts of the gut. They are of an opaque greyish or yellowish white. The most common condition, however, is that the mucus comes away as broken up shreds of membrane, or as stringy pieces or flocculent balls. They may come away mingled with the ordinary discharges of the bowels, or nothing but the mucus may be passed at one time. It is rare to find either blood or pus in uncomplicated cases where typical membranes are passed, but blood is not infrequently seen when the discharge ~~was~~

takes the form of starchy glutinous mucus.
As already stated this material, which-
ever from it takes is found Chem-
ically to be composed of mucus.

The Amorphous, glutinous form
is chiefly found in the cases
which correspond to the Colica
~~passiva~~ mucosa of Nothnagel
It is probably passed soon after
its secretion. The membranes, strands
& rolls are formed through the
mucus being long retained in the
bowel by constipation. Accordingly
its watery element is absorbed so that
it becomes tough. It is possible also
that in these - - (see next page).

(accidentally omitted by type writer)

cases the chemical reaction of the bowel contents is abnormal, and favours the precipitation of the solid elements of the mucus. Normally there is a considerable amount of mucus secreted by the lower bowel, but it is broken up by the action of bacteria, and does not appear in the motions even in simple cases of constipation. When catarrh exists the micro-organisms are in excess in the colon, hence either the substance is more tough than normal when it is secreted, or else the chemical reaction of the intestinal contents is altered so as to precipitate the solids. Under the microscope the appearance is given of an amorphous hyaline ground substance in which are to be seen epithelial cells in considerable numbers from the intestinal membrane, including beaker cells. In addition leucocytes, numerous micro-organisms, of which the *Bacillus Coli. communis* is far the most abundant, and amorphous salts, organic & inorganic are present. Sometimes these salts are present in considerable quantities sufficient to form a sand like deposit, visible to the naked eye--it is then called intestinal sand, and the symptom Intestinal Lithiasis.. Chemically this sand is composed of organic material mingled with salts of lime, magnesium &c. Triple phosphates are generally found in it. Owing to the abundance of mucus, epithelial ^{debris} and bacterial, this

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sand not infrequently becomes aggregated to form Calculi. These have an epithelial or bacterial nucleus surrounded by laminae of organic salts. It will thus be seen that the microscope does not give any very definite information as to the nature of the intestinal process, but the excess of mucus, the presence of so much epithelium, & of the leucocytes, point to the existence of superficial inflammation of the mucous membrane of the intestine.

SYMPTOMATOLOGY.

The usual type of patient that one meets suffering from this disease is a thin ill nourished woman of middle age. She is subject to much mental depression, and is nearly always constipated. The appetite is generally poor and fitful, first one and then another article of diet is dropped under the impression that it disagrees, and in most cases there is a tendency towards a very dry dietary, though at the same time thirst is often a pronounced symptom, and she often becomes addicted to excessive tea drinking. Such is the type most usually met, but I have seen several examples of another type viz., the over fed plethoric & gouty person, who has been a free liver both as regards eating and drinking. The main symptom, however, and that on which a diagnosis is founded is the presence of mucus in the stools, and this together with

constipation, and abdominal pain, constitutes the usual "disease picture" described.

In order of priority of incidence it is usual to find that constipation is the first to appear, and it frequently occurs for a long time before the others manifest themselves. Constipation, however, though it is nearly always present at some period of the malady is not invariable. It may even be replaced by diarrhoea, and more especially by that form of diarrhoea, which is really a masked constipation, and is due to the presence of irritating scybalous masses in the bowel. The appearance of the faeces varies: generally they take the form of small hard scybala, which may be coated over by the mucus, or they may be attached to each other by shreds of tough gelatinous material; frequently small curls or balls of opaque mucus are found attached to the faeces. In cases where the sigmoid is affected, and where there is much spasm of that part of the colon, the stools are tape like. These appearances are not absolute, it is not at all unusual to see stools which look quite normal during the intervals when mucus is not passed, and as already stated when there is spurious diarrhoea small hard particles are found mingled with liquid material. Again when the patient gives way to errors of diet it is not unusual to have lenteric stools, especially

if uncooked vegetables in the form of salads have been taken. After a period of indefinite length the symptoms of pain, and the passage of mucus begin, and it is usually found that they make their appearance together.

PAIN.

The amount of pain is variable not only in its character, but also in its situation, severity, and time of incidence. In this connection it is necessary to distinguish that there ^{are} two main varieties of pain; there is an habitual form, and there is a form which occurs at intervals: more or less irregularly as regards the length of these intervals.

The habitual pain varies in its character and severity it frequently assumes the form of an aching, burning, or twisting feeling, or the sufferer may have a general sensation of over distension.

Sometimes it may amount to severe griping & shooting pain. Generally this variety occurs after a meal. usually about 2 or 3 hrs after the ingestion of food, it is then very likely to be mistaken for ordinary dyspepsia, but this sign is not at all invariable.

It is always increased by errors of diet. Exercise too may be the exciting cause of it, a brisk walk, tennis, cycling or riding may bring on an attack.

Occasionally this variety of pain manifests itself when the patient is in bed, especially towards the

early hours of the morning. A gentleman whom I attended used to awaken every morning with severe pain of a colicky type, which would continue till his bowels acted. The stools were always found to contain small scybala, and membranes in variable amounts.

In situation this pain may be general over the whole abdomen, but it is more frequently localized in a particular part of the colon, the caecum, sigmoid or flexures, I believe by preference.

In addition to this habitual form of pain another variety attacks some sufferers at intervals of variable duration. It is a much more severe form.

The attack is usually ushered in by griping or colicky pains, which gradually become more severe till the sufferer is in great agony. It is accompanied nearly always by nausea and by constipation. The abdomen is swollen and tender. Unless the nature of the illness has been previously understood one is very apt to make an error in one's diagnosis at these times. The pain may be easily mistaken for that due to biliary or renal calculi.

When the pain chiefly confines itself to the region of the caecum such an attack may be easily mistaken for appendicitis, especially as palpation is difficult owing to the abdominal ^{tenderness} ~~tendencies~~. As already

stated that this variety of pain is accompanied by constipation; when the bowels are moved it will be found that the stools contain scybala, mucus, & sometimes blood. Acute exacerbations of this kind may be generally traced either to chills, or to errors of diet, or excessive exertion. The majority of patients who suffer from ^{muco}-membranous Colitis escape them.

PASSAGE OF MUCUS.

We now come to that sign without which the diagnosis of Colon Catarrh cannot be made viz., the presence of mucus in the stools. As already stated this mucus occurs in a variety of forms; it may be as glair~~as~~^{is}, amorphous, or gelatinous material, often very large in amount, or it may occur as tubular casts of the bowel varying in length from about one inch to more than a foot. Most commonly however, it takes the form of shreds or flakes of membrane, or of rolls or balls. These are opaque greyish white, or yellowish white in color. They may be passed mingled with faeces or also alone. The last part of the motion often consists entirely of mucus. Though not invariably so the passage of large quantities of amorphous jelly indicates an acute attack, and that the secretion is recent, whilst membranes and casts composed of tough material indicate that the secretion has been delayed for sometime in the bowel. The passage of mucus is

frequently overlooked, it is rarely mentioned by the patient till it has become a pronounced sign, in fact, it is, I believe the rule that when the quantities are small the patient does not know of its existence till requested by the medical attendant to examine the motions. Though plenty of apparently healthy people pass small quantities of mucus without any evident impairment of health, I think that the presence, especially if regular, of mucus in cases of chronic constipation deserves more attention than it receives, and when in addition, the case is that of an illnourished dyspeptic & despondent person, it indicates a catarrhal condition; usually the beginning of such, at a time when steady treatment on the right lines would bring about an early cure. It must be noted that the pain and passage of mucus are intermittent symptoms, whilst the general ill health and discomfort of the chronic diseases are constant, but I have had under my care cases in which the presence of symptoms was followed by long periods of good health. These somewhat resemble what is usually described as "Colica Mucosa". The attacks in them usually appear to be brought on by chill from exposure to cold, sometimes by errors of diet. The patient feels cold, has severe abdominal pain with constipation, and sickness also is

usually present, then after treatment by warmth, diet &c., one or more motions are passed in which there are large quantities of gelatinous mucus, or of membranes, and recovery occurs. A young woman, notes of whose ^{Case} ~~case~~ are appended, has had three attacks in two years, each lasting about four days, followed by complete recovery to health and comfort.

PHYSICAL EXAMINATION.

The amount of information thus obtained varies much from time to time, and it will be found that the period at which the signs are most in evidence is during one of the attacks of colic. In nearly all instances I have found abdominal palpitation to be abnormally easy owing to the lax state of the abdominal muscles. Tenderness over the colon is generally to be elicited, this is most marked at the flexures, and at the caecum, and sigmoid. Dilatation of the colon as a whole, or of limited portions of it can be usually be made out; more frequently it is found that dilatation of one part and contraction of another is present at the same time. Frequently splashing can be heard and felt in the dilated portions of palpation. One of the most characteristic phenomena is that during an examination the dilatation can be felt at times to be replaced by spasm under the examining hand, and it is

quite common to find a part of the bowel, which has been contracted at one examination is dilated at the next.

The caecum may during the attacks of colic give signs, which are difficult to distinguish from those of appendicitis. The presence of the sign last mentioned will, however, generally be recognised by careful examination.

In addition to the foregoing, which are the cardinal symptoms, there are certain others which nearly always accompany them. Mention has already been made of *dyspepsia*, this usually depends on atonic dilatation of the stomach. The dilatation may not be great, but one almost invariably finds that the stomach extends from one to two inches below the normal level. Stomatitis & ^{py}~~py~~orrhoea alveolaris are frequently seen.

Next to those of the alimentary system, disturbances of the nervous system are most frequent, and include that distressing group of symptoms usually included under the name of Neurasthenia. In all the cases which I have seen personally, these have been most marked, so much so, that I believe that a closer examination of many cases of chronic Neurasthenia would prove that Colon Catarrh was the origin of the malady. A careful

taking of the case's history when the two exist together show that the intestinal disorder may have begun before the Neurasthenic symptoms.

There are in this disorder several very important factors predisposing to depression of the general nervous system. First there is malnutrition of the whole body due to interference with the absorptive function of a large tract of intestine. Secondly, ^{there are} reflex impressions, of a depressant type carried to the central nervous system from a portion of bowel more or less considerable, that is richly supplied with nerves, and which is in a state, if not of chronic inflammation at least of chronic irritation; and lastly the excessive number of micro-organisms always present in these cases produce ptomaines, which have a toxic effect on the body generally. In addition to Neurasthenia one frequently sees well marked Hysteria: In one of the cases of which I append a short history, the patient, a lady, aged 52 yrs after suffering from mucous colic for two yrs frequently had attacks of hysterical excitement at about 5 a.m. in the morning, and did not lose them till treatment brought about amelioration of the primary disorder.

In the same category as these nervous disturbances are to be classed those very common com-

plications--in fact so common as to be almost constant symptoms, viz., disturbances of the Vaso-motor ^{System.} ~~AA~~ Nearly all the subjects of Colon Catarrh suffer from cold feet and cold hands; this is in some instances so severe as to produce at one time the cold dark purple hands indicative of feeble circulation, at another the white "dead" fingers and toes, which in persons suffering from Raynaud's disease is called "local syncope".

Angina Pectoris Vaso-motoria too is occasionally observed; it is practically always when present associated with the condition of hands and feet just mentioned. It is characterized by intense "air hunger" & restlessness. A feeling as if each breath did not fill the chest is complained of though the respirations may be quite deep and full. Pain in the praecordia, and pain and numbness in the hands too are present, but I have not observed that fear of impending death, and the dread of moving, which one sees in cases of ^{true} Angina Pectoris, in fact the sufferer more often flings about from one side of the bed to the other.

It has already been said that well marked mal-nutrition and muscular debility are produced when a case has lasted for a length of time, hence it is usual to find in chronic cases that physical examin-

ation of the abdomen reveals great flaccidity & relaxation of the parietes. The lower segment becomes pendulous, slack and flabby. If the patient has previously been of a corpulent habit of body the skin becomes wrinkled, striated, and hanging in folds. Palpation of the contained abdominal organs is therefore, unusually easy. Following on this relaxation of the walls there is a general sagging tendency of the abdominal viscera downwards, producing the condition described as Enteroptosis. Many writers and observers of the disease have recorded this Enteroptosis, and by some it is even maintained that it is not merely a complication, but actually a part & parcel of the colon catarrh. That this is not so, however, must be admitted by all who have observed how often Enteroptosis is found amongst women whose abdominal parietes have become weakened by the bearing of numerous children, by Hydramnios, or by Ascites, without any of the other signs of catarrh being present.

Downward displacements of the stomach, the transverse colon, the liver and the kidneys, all tend to take place. In the case of the solid organs this is entirely due to lack of support, and prolapse of the stomach and colon also occurs from this cause, but it is here complicated by actual dilatation of the

viscera themselves. I have felt the liver prolapsed almost into the pelvis, but I have never been able to find a floating kidney in any of my cases.
(see l.c. Chap. v. p. 38)
 Langenhagen ^A reports 272 displacements of the right kidney, 18 of both, but none of the left alone.

Disturbances of the female generative organs are exceedingly common complications: these chiefly take the form of chronic inflammatory conditions of the uterus & ovaries, endocervicitis, endometritis, and oophoritis. The history will generally show that they follow confinement or miscarriage in an already debilitated woman, the debility ^{may be due} ~~being~~ due to catarrh of the colon. In a certain proportion, however, this order cannot be proved, as it is found that the uterine disturbances have been the first to appear. Though they would then, no doubt, act as a predisposing cause of the development of Intestinal complaint provided that the other favouring conditions were present, it cannot be proved that they do more than this in the production of the disease when one considers the enormous number of women who suffer from uterine diseases without involvement of the colon.

Membranous Dysmenorrhoea too is sometimes met with, an association which caused Langenhagen ^(l.c. Chap. vii page 73) ^A to suggest that the processes are identical in nature, but this cannot be maintained, as the membrane of Membranous

Dysmenorrhoea is a distinct menstrual decidua composed of the uterine mucous membrane, whilst the *are not exfoliation of the intestinal lining* membranes of Colon Catarrh ~~have no such structure.~~

It may, however, be noted that the two conditions occur chiefly in persons of the same diathesis viz., the gouty.

DIAGNOSIS.

With a clear conception of the clinical picture in the mind of the observer diagnosis becomes easy. Error is most likely to occur from the fact that a patient may not have observed the passing of mucus. In the early stages too there are certain symptoms, which may lead one astray. The attacks of colic when first they come under observation may be mistaken for biliary or renal calculus, or even for intestinal obstruction. The absence of the positive signs of the two former, however, excludes them, whilst as regards the latter the fact that treatment by opium, and later the administration of a high enema (colon flushing) is followed by the discharge of mingled faeces, & quantities of glairy mucus, or of membranes, will before long dispel the doubt.

An acute attack of mucous colic, of which the physical signs are limited to the caecal region may be undistinguishable from appendicitis. Two points, either or both of which may, however, be absent, will

point to the true nature viz., that in Catarrhal Caecitis the pulse is frequently very slow as opposed to the quick hard pulse of acute appendicitis, and that when a local tumour is present it tends to exhibit the phenomenon of alternate dilatation & contraction already mentioned.

As a general rule the history of the case, carefully taken is the best guide, but in spite of precautions, errors may be made till the typical membranes are seen.

Prognosis as regards life is good, that is to say that few actually die from the condition, but a disease which so profoundly affects the general nutrition, must if uncured, shorten the life of the sufferer. As regards cure the prognosis is uncertain.

When treatment is ^{Commenced} ~~recommended~~ early there is ^{no} ~~is~~ doubt that the mucous membrane can be restored to a healthy state. In those cases which have long remained untreated the outlook is not hopeful, especially when the abdominal walls have become atonic, and the abdominal viscera in a state of Enteroptosis; Profound Neurasthenia too is an unfavourable sign in the prognosis. Even in the most intractable cases, however, symptoms can be relieved, and the general nutrition improved.

TREATMENT of the complaint embraces the administration

of certain drugs, local treatment of the colon by enemata, douche, dietetic treatment, general hygiene & massage.

The drug treatment is by no means satisfactory.

There is no drug which will directly exercise a curative influence on the disease.

On the assumption that the trouble is of rheumatic or gouty origin Salicylate of Soda in doses of 15 grains daily have been recommended. Dr. Stacey Wilson ^(British Medical Journal Dec 6 '1902) speaks favourably of it. I have tried it in all the cases which have come under my own notice, but have not been able to record any marked success from its administration, though in one case--the details of which are recorded--it appeared to diminish the frequency & severity of the colic.

Tonics & alteratives have been advised with the object of raising the general health of the individual. Quinine, Iron, Arsenic, Mercury, and the mineral acids have all been tried. In all my cases iron and acids appeared to aggravate the discomfort, especially when they increased the constipation. Mercury neither as per ^{oxy} or proto-salt appeared to affect the course of the illness.

Tincture of Hydrastis. In several instances I have found that this drug ameliorated some of the symptoms very markedly. It should be given in full doses not less than 1 drachm three times daily. One of

my cases, a woman who had suffered for nine years, was quite positive that it had afforded her more relief than any other drug treatment.

I believe that it should always be given a trial.

SYMPTOMATIC TREATMENT.

For the relief of the constipation nearly all the usual aperients have been advised. There is a general consensus of opinion amongst nearly all observers to condemn the administration of purgatives, & no doubt the strong and violent ones actually do considerable harm. My experience leads me to believe however, that the regulation of the bowels by a mild cathartic has a most beneficial effect on the complaint, and that in those cases where the patient has neither the time nor the money to undertake a prolonged "cure", it is better to use a mild aperient than to allow constipation to continue.

Some of the most troublesome symptoms are certainly kept in order by inducing a regular daily action of the bowels. In a few cases, however, it will be found that any aperient whatsoever produces violent spasmodic pains. These are I believe ~~are~~ cases in which the bowels are loaded with large tough, & firmly adherent pseudo-membranes.

Cascara Sagrada when advised in small doses (7-10 mins. of the liquid extract) three times daily, is

generally followed in a few days by relief of constipation. It should be combined with Hyoscyamus or Belladonna.

Pil. Colocynth et Hyoscyami gr. 2, combined with Extr. Belladonna gr. $\frac{1}{2}$ may be given occasionally with advantage.

A mild aperient mineral water of the alkaline or the Sodium Chloride variety given in the morning, will be found useful.

A wineglassful of Kissingen water is the form which I now advise. It is given not so much for its aperient action as to stimulate the secretions of the stomach, and the liver.

PAIN has to be relieved during the acute attacks of the colic. For this purpose morphia in some form must be given. It is best to give $\frac{1}{4}$ gr. morphia hypodermically, to apply heat to the abdomen, and to give a high enema by means of Kussmaul's tube, either of plain warm water, or of olive oil. By this means quantities of mucus are evacuated, and relief is obtained, but it is important to bring the patient under the influence of the narcotic first, else the enema will produce much spasm of the colon, and the relief will not be obtained.

THE LOCAL TREATMENT.

Under this heading I include various forms of enemata, and that variety of them known as "Intestin-

al Lavage".

The habitual use of the ordinary soap and water enema is to be condemned; it has no curative effect on the constipation, and it does not reach far enough to help to wash away mucous shreds.

As already stated during acute colic large enemata of warm olive oil, at least a pint in quantity, are found very useful. The rectum should first be emptied by a plain water enema, then the oil is to be given by means of Kussmaul's tube. It should be retained as long as possible. If the patients are under the influence of opium it is not difficult for them to retain this for several hours, after which there is usually a stool containing hard scybala & membranes mixed with the oil. Intestinal Lavage is highly spoken of by de Langenhagen (see his work on Mucous-membranous Colitis p. 104), who looks on it as not merely a method of relieving symptoms, but of actually curing the disease. The method of administration is as follows:- The patient first lies on the back with the thighs flexed. The receptacle for the fluid is placed at a height not more than 16 inches above the horizontal plane of the patient, the fluid is conveyed by a flexible tube at the end of which is fitted either a soft oesophageal tube, or a long red rubber canula--either of them should be

fitted with a stop-cock. The temperature of the water should be for the first week 104 Fahr. It should be gradually increased to 112 Fahr. It is recommended to give two applications each morning. The amount of the first should be about 1-1½ @rts., and it should be evacuated as soon as possible. The second injection should be of 1 pint, and should be retained as long as possible. Before it is evacuated the patient is advised to turn over on the right side with the object of permitting the flow thro ugh the colon. Various additions have been made to the solution, thus tannic acid, solutions of zinc, silver, alum, or mercury salts have been dissolved in the fluid. I do not think that any of these should be used. In one of the cases viz:- No. 1. where I used Nitrate of Silver 2 grs- oz, constipation was increased and the evacuated mucus became tough in consistency. I have however, on several occasions given in the Douche, Boracic acid and Common salt, 1 drachm of the former, and 40 grs., of the latter to the pint of water. This had no ill effect, but on the contrary after its use for about a fortnight I considered that the amount of mucus was diminished more than by the plain douche. Lavage for those who can have a nurse to apply the treatment, or who can and will carry it out themselves, is a most useful proceeding. It

prevents the constipation, removes all hardened or irritating scybala, thereby promoting a healthier state of the bowel mucous membrane; it also aids in the expulsion of false membranes and casts.

The chief objection to lavage is that it takes a long time to do thoroughly -- at least one hour every morning -- moreover the use of plain water soon becomes painful, and sets up much spasm of the rectum and sigmoid, rendering the administration difficult. The addition of some 3 or 4 oz., of mucilage of linseed, will however diminish this difficulty.

DIETETIC TREATMENT.

There is considerable divergence of opinion as to the most suitable method of dieting these cases, for whilst one school teaches that the food should be of such kind as to leave the smallest possible undigested residue, especially condemning all vegetables, which contain hard seeds, or which are rich in cellulose, another school teaches that the food ought to be such as to leave as much residue as possible in order that the intestine may be stimulated to act regularly by the bulk of its contents. Thus on the first side the patient has to choose her food from milk, eggs & custards, porridge, milk puddings, soups, beef tea, white fish boiled, lean ^ameat (beef, mutton, veal) finely minced, vegetables to be finely

purées

mashed up in the form of ~~purées~~. Cabbage and all vegetables rich in cellulose to be entirely excluded. Salads to be entirely discarded, and only the juice of fresh fruit to be swallowed. This plan of dietary is the one advised by most English authorities, and it is the one followed in Plombières. All the first cases which came under my notice were treated according to it. It is of great value in reducing the accompanying indigestion, and also patients so dieted suffer less from spasmodic pain. I have always found however, that the tendency to constipation is increased by it, and soon causes trouble if not otherwise relieved. Combined with intestinal lavage it is a method which certainly promotes the comfort of the individual. I am quite well aware that my personal experience of about ¹²~~10~~ typical cases does not entitle me to dogmatise. but I have tried this method, and the 2nd method -- to be discussed later -- on the same individuals, and I have treated all the last cases which I have seen on the 2nd method -- now to be detailed, and I believe that the results have been better.

In place of giving a diet leaving very little solid residue Von Noorden advises that the food should consist of articles, which will leave as much residue as possible; of these he particularly advises substances rich in cellulose. In addition to ordinary

articles of food he advises that a large amount of coarse wholemeal bread should be given daily, and along with it as great variety as possible of leguminous food, including the husk, together with cabbage, fruit with thick skins and hard seeds, such as gooseberries, figs, currents, grapes. Finally large quantities of fat bacon and butter. (l. c. 42) He claims for this method that the large quantity of residue together with the bacteria, which it contains causes a gradual & slow decomposition in the intestine with the ^{slow} evolution of gases, and that by this means the secreted mucus is broken up, and the faeces are not bound into solid lumps. Moreover he maintains that all, or nearly all the subjects of Colon Catarrh being under nourished, a full and free diet is essential to renew their physical vigour.

In the hands of von Noorden himself & his pupils, his methods, to judge by his published results are very satisfactory, as he claims that he is completely successful in 79% of his cases, and that only 5% are total failures, but I do not think that there are many private patients in this country who would consent to carry out the dietetic course, which is above indicated, especially those whose digestions are weak ~~such~~ as is generally the state met with in colon cases. I believe, however, that a slight modification of von

Noorden's plan, in which the coarser articles of food are left out, and simply a good full ordinary diet prescribed is the best plan.

The plan which I have found most useful is the following:-

To begin with for the first week of the treatment the patient should be in bed; after each meal the abdomen should be covered with hot compresses, or an india rubber bottle filled with hot water should be kept applied to it for two hours. Should there be much pain at first it is well to give a suppository containing $\frac{1}{2}$ gr Ext. Belladonna.

Massage of the large intestine is given daily for half an hour each forenoon, and half an hour at bedtime. This is continued till the bowels begin to act regularly, and till then an oil enema should be given ^{each} second day.

The feeding is administered on the following plan:-

At 8 a.m. 1 tumblerful of milk to which 4 oz., of Apollinaris or Kissingen water is added.

At 9 a.m. Half a pint of milk to which 1 oz., of pure cream is added. This may be varied by a similar quantity of weak tea, made by infusing the tea directly with the milk. A small plate of well boiled oatmeal porridge- or two tablespoonfuls of "Force" food, or 2 oz., of shredded wheat biscuits can be taken with

the milk after which as much bread and butter as the patient can eat. Some marmalade may be added.

Two days weekly the porridge, or "Force" may be omitted, and a fresh egg, lightly boiled, substituted.

At 11 a.m. A breakfast cupful of broth with 2 or 3 oz., of bread and butter.

At 1 p.m. Dinner, consisting of meat or chicken with vegetables--potatoes, and again bread and butter. After which some cooked fruit as stewed apples, prunes, or fresh fruit in season with cream.

At 4 p.m. ^{Half} ~~Haft~~ a pint of Milk, bread and butter.

At 7 p.m. Supper, consisting of fish, meat or fowl. No vegetables except one potato. Followed by some milk pudding, or cooked fruit with cream as variety.

About 10 p.m. A final tumblerful of milk. Patients who have been previously on a very low diet to prevent the usual dyspepsia, will at first experience discomfort from so full a dietary, and the increase will have to be made gradually, but those who can obtain good & intelligent ^un~~r~~sing will, by the aid of the means above mentioned to combat the discomfort, soon find that their digestive troubles ~~soon~~ disappear.

Hygienic treatment including massage of the large intestine is an important part of the treatment. Massage finds its most useful application in those

chronic cases, which are put upon a diet such as I have last described. It should consist of regular stroking movements along the course of the intestine, should be applied twice daily, forenoon & afternoon. I consider that it should be given for half an hour at each application, and that the usual rule of rest for an hour afterwards should be enforced. It should also be continued for at least a month. For those whose muscles generally are in a state of flaccidity, general massage will be found useful.

As regards general hygiene, it has been already stated that for the first week of treatment the patient is best confined to bed. As soon as possible it is well to begin with regular exercise in the fresh air, of which walking is the best. The period of exercise must be gradually increased, and it is well to take as a guide the amount which can be tolerated without producing abdominal pain. I have not found that physical exercises are well borne by these people: if given at all they should not be started until the pain is relieved, and they find their chief use in counteracting the muscular debility, which is so well marked. They should be of the lightest description. Great flaccidity of the abdominal wall with Enteroptosis is the chief indication for their use, and in these cases exercises to develop the

Recti & Obliqui, may be found useful if the patient is not of advanced age. Warm but light woollen clothing is essential.

To summarize the treatment, which I believe is most useful:

(a) During acute attacks with pain & sickness, rest in bed, milk diet, and morphia followed by a large enema of olive oil.

(b) In chronic cases Dieting, the best plan being, I believe a modification of the plan recommended by von. Noorden. Massage, and if constipation continues Intestinal lavage. When one has to deal with a patient who cannot afford either the time or the money to carry out such treatment one is obliged to give some form of medicinal treatment such as Salicin or Salicylate of Soda, and I believe one should always try the Tincture of Hydrastis. Aperients are best avoided, but it is better to prescribe a mild aperient than to allow constipation to continue.

For wealthy people, especially those whose trouble is due to over-feeding, and perhaps the excessive use of alcohol, a cure at one of the "Spas" either of this country, or of the Continent, may be found beneficial.

Plombieres in the Vosges district of France has attained a high reputation for the treatment of these cases. I have seen marked improvement result from

a visit there, but on the whole my experience is not so favourable as the reports published might lead one to expect.

The general plan of treatment adopted at Plombieres is as follows:-

1. A bath every morning of 20 minute's duration.

Temperature 35 °C.*

2. Half an hour before the two main meals the patient drinks $\frac{1}{2}$ tumbler²ful of water from "La Source de Dames".

3. Each morning the intestine is douched before the bath. This is called the Horizontal douche. The temperature of the water is 42 °C. It is applied in two consecutive douchings, the amount of each being $1\frac{1}{4}$ litres.

The patient rises at 6-15 a.m., and goes to the Bath, where the horizontal douche is first administered.

Each one administers it for himself or herself.

They lie on a couch in which is a circular aperture for the ^{water}~~water~~. The can, which is fitted in a frame over the couch is made of metal, and is fitted with a tube to show the exact level of the water in it, & a thermometer to show temperature of the contents.

The pressure of the "head of water" is regulated by raising or lowering the can in a manner resembling the fixings of a gasometer. The process lasts about an hour, and as already stated consists of

two applications of $1\frac{1}{4}$ litres each. The first is evacuated at once; the second retained as long as possible. The douche is followed by the bath, whilst the patient is in the latter a "Tivoli" or Sous-marine douche is given, which consists of a canful of water, temperature 45 C. poured over the abdomen out of an ordinary watering can fitted with a rose.

The bath is followed by massage half an hour in duration, for the 1st week only given every 2nd day, then rest for an hour in bed, when a cupful of weak tea with one roll & butter is partaken of.

At 10-30. a.m. Half a tumblerful of the waters is drunk.

At 11. a.m. Déjeuner a la fourchette. Followed by exercise.

At 4.p.m. Afternoon tea.

At 6.p.m. Dinner.

At 10.p.m. to bed.

The two chief meals are composed almost entirely of animal food. Vegetables, fats and fruits are excluded.

The full course lasts six weeks. The medical authorities of the place advise an annual visit for three years to complete the cure. From what I have seen of the results I think it is best for the fairly

robust and gouty. I have not seen weak ~~women~~, neurasthenic women much benefited, though it is only fair to state that the local medical practitioners claim that this class of patient too is "cured" by the full course.

As to the rationale of the treatment, it is claimed that the benefit is due to the Silicate of Sodium contained in the water, which they say acts as a "water glass dressing" to the bowel mucous membrane. This, however, is highly improbable as the quantity of the Silicate is infinitesimal. No doubt the regular life, the intestinal lavage, massage and dietary are the secrets of the success.

The plan of treatment adopted for these cases at the other Continental Spas is similar to that of Plombières.

In concluding these remarks on the treatment a word must be said with regard to surgical interference.

Right anterior colotomy has been performed to ²test the lining of the colon by preventing the passage over it of all faeces, the artificial anus being closed at a later period. Though I have not yet seen a case in which I should consider this necessary, I believe it ought to be advised if the usual medical means have failed, and the patient is being reduced to a state of chronic invalidism. Hereafter I append some notes on cases which have come under my super-

vision, together with the system of treatment adopted and its results.

Case 1. A gentleman aged 41 years; by occupation a missionary in India.

Complaint: Constipation, abdominal pain, and loss of flesh.

Previous History: Had been in India for twelve years; during the last 5 years of that time he had been stationed in the ^{Tera's} ~~Peru~~, and had whilst there remittent fever three times. The last attack occurred a year previous to my seeing him. It had been very severe, he had gone to "the Hills" to recruit after it, but did not regain strength, so was ordered home to England. He states that he has never had tropical dysentery. Present symptoms made their appearance during convalescence from last attack of fever. He looks ill and wasted, has lost 4-st.6-lbs. in weight. His face is of the type which, in a woman, would be called uterine. He states that he is still losing flesh, that he is much troubled by indigestion and flatulence. He never has a movement of the bowels without taking an aperient. He had noticed that he was passing jelly-like material and membranes, for some months. He has much twisting and burning pains in his bowels after taking food -- generally about 2 hrs. after. All aperients produce much griping and spas-

modic pain,, but if he does not keep his bowels open he has violent attacks of colic, which are followed by the passage of much membrane. He showed me a prescription given him by a doctor in Calcutta for a pill which contained Calomel gr.3, ^{Proton} ~~Castor~~ Oil gr. $\frac{1}{4}$. This he had been taking for about two months.

Physical Examination:

Alimentary System: His tongue is smooth and, in patches denuded of mucous membrane. His gums are red, slightly spongy, and bleed readily. The abdominal walls are very flaccid, the recti and obliqui feel atonic and wasted. Palpation is easy. The liver is not enlarged. The splenic dulness is increased but the organ does not project beyond the ribs. The stomach is dilated extending about two inches below normal level. There is tenderness on deep palpation over the coecum, at the flexures, and over the descending colon. Except over the stomach no splashing sounds are heard. No tumour can be detected in the abdomen, and there is no sign of malignant disease per rectum.

The heart and lungs are healthy. The red corpuscles of the blood are 3,800,000 per c-inch. There is no evidence of "kidney disease".

The following day I examined his motion, he having taken an ounce of Castor Oil the previous night.

The stools consist chiefly of greyish white membranes, and some jelly like mucus with which are mingled some small hard scybalous faeces.

Having had no experience of Colon Catarrh at that time I advised him to see a consulting physician.

As Dr. ^{Shon}~~Haberghen~~ was the consultant for his Missionary Society he went to him. The diagnosis of Muco-membranous Colitis was confirmed. He was given a dietary consisting chiefly of soups, meat extracts, and finely pounded meats. All fruit and vegetables rich in cellulose were forbidden. Aperients were forbidden. The constipation to be relieved by enemata of olive oil. He was to have massage, both general, and of the abdomen, daily. To rest for $1\frac{1}{2}$ hrs after each ^{meal}~~meal~~ daily. For medicine he was ordered 5 grs Ferri-et-ammonii citras 3 times daily. He carried out this plan for two months with improvement, gained 10 lbs in weight, but still passed membranes after any period of constipation, or if he neglected his dietetic rules. He was then advised to try a course of treatment at Plombieres whither he went for six weeks. I did not again see him on his return, but heard by letter that he was much benefitted, and hoped soon to be able to return to duty.

Case 2. A young man aged 32 years. A Land Surveyor. came complaining of "Indigestion" with

flatulence, and abdominal pain, also of debility.

Family History. Father died aged 46 from heart disease, a result of Rheumatic fever. Mother alive and one of a long-lived family. Has four brothers, the eldest of whom has had several attacks of rheumatic fever. Three sisters all healthy, eldest of them aged 19 years.

Personal History. He had been a fairly strong young man of active habits. Four ^{years} ~~ys~~ previously had gone to California as a Fruit farmer, whilst there had malarial fever, 3 attacks in three months. His health being impaired he returned home 13 months previously: at home he improved, but did not get back his former health. During the malarial attacks he lost two stones in weight, and he had only regained 11 lbs although he had no fever since his return.

Dating from his illness he began to suffer from pain coming on about 2 or 3 hours after food, and he found that exercise of any kind produced abdominal pain, & great sense of fatigue, consequently he was obliged to give up all athletic games.

The bowels had become very irregular in action and he could not get a satisfactory evacuation unless he took medicine. For the past six months he had occasionally suffered from attacks of Syncope, which usually came on when he rose in the morning; they

were accompanied by nausea, profuse perspiration, and a feeling of inability to take a satisfactory respiration. He had observed that these attacks were followed by an intense desire to go to stool, and that after them the first motion was almost entirely composed of skins, & jelly like material.

Examination. He was a tall man, 5ft 11 in, in height. Weight, 10 st., 11 lbs. His muscles are flabby, and he has little subcutaneous fat.

There was no evidence of heart or lung disease.

Examination of Abdomen. On palpation the abdominal muscles are fairly resistant-no tumour can be felt.

There was no definite tenderness, but he complained of an indefinite sensation of pain & nausea on palpation over the colon. At subsequent examinations during attacks of pain, I frequently felt in the region of the caecum an elongated sausage like lump, which alternately contracted and dilated.

There was no disease of the rectum, not of any other organs. His urine was heavily charged with uratic deposit, but otherwise contained no abnormal constituents. The stools were frequently examined, and were found to contain membranes of mucus, especially after the syncopal attacks, when he would pass tubular casts of tough grey mucus some 5 inches in length. At these times the faeces were hard & scybalous.

Treatment. He was ordered 5 minims of Tinc. Fer, Perchlor in $\frac{1}{2}$ an ounce of water thrice daily.

His food was to consist of a diet which would cause as little residue as possible. Strong soup and beef tea with pounded meats, some bread and a little potato at dinner, but no fruit or vegetables, no fat, and none of the stringy, nor tendinous parts of the meat. He was to use the method of intestinal lavage, already detailed, each morning. The Iron mixture was soon discontinued, as it did not agree. The douching brought away at 1st considerable quantities of membrane with some hard scybala. After three weeks of the treatment he was ordered massage for half an hour each day. At the end of six weeks he had lost his pain, did not pass membranes, had no indigestion, and stated that he felt quite comfortable, but had not gained weight. He gave up all treatment, and returned to work. Still suffered from constipation, otherwise he remained well for over a month, when he began again to pass membranes, and to have much pain. He returned for treatment. The plan now adopted was that he was confined to bed in the charge of a capable nurse, he was allowed a full ordinary diet with fruit, vegetables, fats (the plan detailed on *Folio 40* page 40). For $1\frac{1}{2}$ hrs after each meal the abdomen was covered by a large rubber bottle containing hot

water. He had massage of the colon twice daily for half an hr at a time. Each morning at 8 a. m. he was given 4oz., of Kissingen water, and thrice weekly he was given an enema of olive oil, 1 pint, by means of Kussmaul's tube.

At the end of one week he was allowed to get up, and have a little exercise, lying down again after food. The bowels began to act regularly at the end of ten days, when the hot application to abdomen, and the enema were stopped.

At the end of 4 weeks he had lost all pain after food and was gaining weight. There were no mucous membranes in the stools, and he was able to take regular exercise before and after noon.

At six week's end he returned to business, but kept up the dieting and massage for a total period of three months, when he was quite convalescent, and has suffered no relapse since.

Case 3

A lady aged 52 yrs, a widiw, by profession a teacher of music. Has had six children, the youngest of them 23 yrs of age.

Complained of ^aweakness & loss of flesh, severe abdominal pain of a colicky type.

Family History. Her father died at the age of 30, she thinks from Phthisis. Her mother, a healthy woman lived to be 76 yrs.

One sister ^{has} committed suicide whilst suffering from Melancholia: one brother is at present in an asylum for Melancholia. Two sisters have suffered much from Rheumatism.

Personal History. After the birth of her first child 35 yrs ago, she suffered from Puerperal Insanity. For twenty yrs she had had such pain in her joints. The fingers showed the usual distortion caused by chronic rheumatoid arthritis. Otherwise she had led a busy life and worked hard at her profession, which entailed long hours. She had always been troubled with constipation.

When she came under treatment her expression was one of worry and anxiety, she looked emaciated, said she had in the past 2½ yrs lost 25 lbs in weight.

Circulatory System. There was no evidence of heart disease. The circulation in the hands and feet was bad, her feet being always cold, her hands were cold, and generally ^{the} ~~the~~ nearly purple in colour. Sometimes her fingers "go dead".

The Respiratory System. showed nothing abnormal.

Alimentary System. The tongue was red, and much fissured. Her teeth have become loose and fallen out during the past two yrs. She complained of much pain after food. This was accompanied by flatulence, and began about an hour after meals. She also fre-

quently had attacks of severe griping pain in the abdomen, which she described as of a tearing and burning character, and which she had observed to be always worse if she allowed the bowels to become constipated. Constipation had been present for yrs. She always had had to take an aperient to get an action of the bowels.

On examination the abdominal walls were found to be flaccid and pendulous. The liver and stomach were in the normal position. Splashing & gurgling could be felt over the descending colon & the sigmoid flexure; at this point the colon could sometimes be felt hard, and resistant giving the sensation of spasm, at other times it could not be palpated. Previous to my seeing her, a diagnosis of cancer had been made, so I requested her to see Dr. Furneaux Jordan of Birmingham. A most careful examination was made by that gentleman and myself without any positive sign of malignant disease being found.

When her stools were examined it was found that the motion was usually broken up into small hard round pieces. Mucus was not always present, but after the attacks of severe pain it could be brought away by an enema in the form of shreds & membranes 1-2 in. in length, & as small flocculent balls in considerable quantities. She had never passed blood.

Nervous System. She frequently suffered from severe vertical headache--Her memory had become bad. She was much troubled by lowness of spirits. Hysterical symptoms were well marked, she used to wake up about 4-5 a. m. & in attacks of maniacal excitement accompanied by globus.

Treatment. She was confined to bed, and dieted according to the plan, which I have called the modified von Noorden dietary, but in spite of rest and hot packs to the stomach during the digestion, it caused so much pain and discomfort, that it had to be discontinued, so she was put on milk for a week, after which articles of food were gradually added, till at the end of three weeks she was able to take the full diet. During that time the bowels were regulated by means of large olive oil enemata. She had massage of the abdomen daily for half-an-^{hour}~~hr~~ in the forenoon. After the 2nd week she was given one drachm of Tincture of Hydrastis thrice daily, & 4 oz of Kissingen water at 8 a.m. daily.

At the end of the 3rd week she was able to be up: her progress was slow owing to obstinate constipation, any attempt to get the bowels to act naturally being futile for quite five weeks, and when they did act pain followed by mucus stools resulted. In eight week's time she had gained 6 lbs, and was able to take

Omitted

55¹/₂.

exercise for three quarters of an hour each forenoon. The digestion was then good, and the bowels regular. (The massage was then stopped at the end of six weeks).

She resumed her ordinary diet and mode of life at the end of ten weeks, but continued to take the Tincture of Hydrastis, and a morning draught of mineral water.

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I saw her at three month's end, when she expressed herself as quite well & comfortable, being free from pain, and consequently in better spirits. There was then no mucus in the stools, and she had gained after a holiday at Malvern, nearly a stone in weight.

Case 4. A lady, married, age 55 yrs. She had one child twenty yrs ago, none since.

This lady came under treatment in March 1903 for chronic alcoholism. Her family history was good, & she had been a healthy active woman in the first forty years of her life: She had become addicted to excessive eating and drinking for the past 10-15 yrs, and latterly had become habitually intemperate in the use of alcohol. In the past two years she had two severe attacks of gout. In January 1903 she had acute gastric catarrh, from which she had only partially recovered when she again came under treatment in March. At that time she was a stout, bloated woman weighing nearly 14 st., though only 5 ft 6 in., in height

Her face was puffy, and her ears and hands showed well marked Tophi. She was confined to her bedroom. On Examination. There was bronchial catarrh & hypos-tasis at the base, in both lungs. The pulse was 107 per minute, soft and irregular. The heart was dilated, Cardiac dyspnoca well marked. The ankles and legs were oedematous.

Alimentary System. The appetite was capricious. She suffered from morning sickness. The bowels were irregular; there was always much pain before they acted. She frequently had to sit straining at stool for a considerable time, before she could evacuate large quantities of glairy, gelatinous mucus, which was often unmixd with faeces. This discharge would occur 2 or 3 times each week, and generally in the forenoon. When the bowels had emptied themselves of the mucus, she became comfortable. Being a woman of coarse manners she used to refer to this symptom as the "Glue & Gelatine"

Physical examination of the abdomen showed that the walls were weak as regards muscle, though they were fat. The lower part of the abdomen was pendulous & flabby. The liver was enlarged and prolapsed downwards. The Stomach also was dilated and displaced downwards, succussion could be elicited. Palpation produced the sensation of nausea. There were not any positive signs obtainable over the colon. There was no evidence of tumour

either by vaginal or rectal touch.

For treatment, an attempt was made to cut off the supplies of alcohol, but this was by no means satisfactorily accomplished. She was put on milk diet, given a wine-glassful of Apenta water, made hot, each morning, and the bowels were emptied by the "colon" douche. For a while there was improvement in her symptoms generally, and it was found that as long as alcohol was strictly withheld, she improved. During the fourth week of treatment, however, she had an attack of Cerebral hemorrhage from which she died.

This case was particularly interesting as one of Catarrh of the whole alimentary tract produced by alcohol in a gouty subject. It was also characteristic of that type of the disease which Nothnagel calls "Colica Mucosa". I have seen several similar cases to this one, and I consider that they are the type of persons who do well at a Hydropathic establishment where their habits are carefully supervised, and their diet regulated. Such people do exceedingly well at Plombieres.

Case 5. .

A gentleman aged 40 yrs. a medical practitioner.

Family History.

Father suffered from rheumatism for many years, and died of heart disease. Mother had been highly

neurotic; died of an obscure disease of the bowels.

One brother died suddenly of heart disease.

Personal History. Had suffered from dyspepsia all his life. As a boy had severe eczema. Whilst a student, a hard reader, he had been much troubled with irritability of the bladder, for which he had been advised to take small doses of acid Nitric dil: This he found made him much worse. In early professional life he was constantly troubled with irritability, either of the stomach, bladder, or the eyelids. Frequently had palpitation, also postnasal catarrh. During his "thirties" any professional worry or extra work brought on indigestion and colic. Finding that his digestion was better when he abstained from fluids at meals, he adopted a strictly dry diet. He did not remember that he had been troubled with constipation, but thought that his stools were frequently insufficient in amount. Frequently had itching at anus, & tenesmus. For this he would have an enema, which usually brought away small hard faeces, resembling, he said sheep stools. The removal of these gave relief at once. For the last nine years he had been subject to attacks of colic, which occurred at intervals, varying from 4 to 7 weeks. They could always be induced by extra exertion. For the past 4 yrs he had noticed masses of inspissated mucus in his stools. These were certainly

more plentiful

after an attack of colic. The attacks of colic were so severe as to prevent work. He was a typically neurotic man, of active habits, frequently irritable, and often subject to attacks of profound depression. He has never had acute rheumatism or gout, but frequently had joint pains; had neuritis of the left ulnar nerve, which was thought to be rheumatic, and had rheumatic pharyngitis.

Physical Examination. Height 5ft., 8 ins; weight 9 st., 5 lbs. His muscles were small, but of good quality. He appeared to be illnourished. Heart sounds were normal, action of heart excitable. Lungs were healthy.

Alimentary System. Tongue clear, red with numerous enlarged papillae. His teeth had become much decayed during the past three years. There were signs of old rheumatic pharyngitis. Abdominal walls were firm, the muscles being of good tonicity. The liver and spleen were normal. The stomach was dilated, its lower border came to within an inch of the umbilicus. The splenic flexure of the colon was tender to touch, as also was the sigmoid. At some examinations the gut at latter point ^{could} ~~can~~ be felt to be distended and hard, at others firmly contracted and hard. There were no physical signs of tumour.

The stools were frequently examined, and always

found to contain some inspissated mucus in form of shreds, membranes, or round balls.

urine sp.gr 1023, acid, no albumin, no sugar. Frequently contains crystals of uric acid; urea excretion 380 to 400 grains daily.

This gentleman by my advice consulted Dr. Stacey Wilson of Birmingham, in Feb. 1903. The diagnosis made by Dr. Wilson was:.

1. Uric acid Diathesis
2. Colon Catarrh.
3. Dilated Stomach.

The treatment advised!.

1. To gradually reduce the amount of animal meat in diet. To obtain his proteids from milk, plasmon and bread.
To give up tea and coffee.
2. To take:.

3. ~~Rx.~~ Liq. Hydrarg: Perchlor.

Tinc. Fern Perchlor

Aqua m. x

Glycerin ¹/₂ As. Chloroformi Semiunciam.

Aquae Chloroformi *Alumina* *min.*

To be taken three times daily before food

3. Sodii Salicyl gr. 10 to be taken each night in a tumbler ful of water.

4. R. Gut-Bella donnae gr $\frac{1}{2}$

Pil Coloc et Hyoscyami gr $\frac{1}{4}$

One to be taken every 2nd night p. p.

~~One to be taken every 2nd night.~~

He very soon gave up the iron mixture, as he found that it produced constipation, and did not agree with his digestion. The other part of the treatment was kept up ~~for~~ a month without any material change in the symptoms, and with a loss of 4 lbs in body weight. At that time he gave up the pill, but persevered with the Salicylate of Soda, & the dieting, and he then ^{be} ~~he~~ gan to adopt the plan of intestinal lavage already explained. The earlier douchings brought away much hardened mucus. After three weeks of this treatment he felt better, being free from pain, and in good spirits. He did not, however, gain any weight.

Accordingly in July he went to Plombieres where he underwent the full treatment of the place for 16 days but owing to a severe attack of urinary gravel, followed by mental depression, he gave up, and came home not any better.

After this he carried out no treatment for 4 months, but being attacked again by severe colic he again came under treatment.

^{8.}
This time the plan adopted was rest in bed, the modified von Noorden diet, massage twice daily-- olive oil enemata till the bowels began to act. Hot water bag applied to stomach during digestion.

He had a good deal of trouble with the diet at

1st ~~but~~ this subsided within a week so that ~~he~~ was able to keep up the treatment. The bowels acted well from the first. No mucus was ~~formed~~^{found} in stools after three weeks. He rapidly gained 10 lbs in weight - At five weeks end there was no sign of gastric dilatation. He was then feeling quite well and has remained in good health and able to carry on an extensive practice ever since.

Case 6. A gentleman, aged 43, a retired medical practitioner. Till 10 years ago he had carried on a large Country practice in one of the Eastern Counties of England: having come into a fortune he retired.

Family History. Father alive aged 70 years, has suffered from gout. Mother died at age of 40 of Heart Disease - One sister^{died} at 30 of Phthisis. One sister and one brother strong and healthy.

Personal history. Had ague about 15 years before.

Had an attack of acute Rheumatism 6 years ago from which he made a very slow recovery. Has had three severe attacks of influenza, the last in 1900.

Frequently had suffered from joint pains of a rheumatic type, he had been much subject to rheumatic ~~pharyngitis~~^{pharyngitis}. He dates his present symptoms from 1900. He had always been of a constipated habit

but at that date he began to notice that exertion of any kind produced pain in his abdomen of an aching & burning kind, that he had discomfort after food and that at intervals of two to four weeks he had attacks^{of} very severe griping pains for which he used to take cholrodyne. These symptoms gradually increased till at the time of examination he declared himself quite unable to take exercise and he had gradually eliminated article after article from his diet till he had become very ill nourished. His complaint had been always called pure Neurasthenia till it was found in 1902 that he was passing considerable quantities of tough mucus in his stools. He had consulted many Physicians, had spent a Winter 1902-1903 in the Riviera, but had not improved.

When he first consulted me I found him to be Neurasthenic to an abnormal degree: suffering from great depression of spirits, spent most of his day lying on a sofa, occasionally going out in a bath chair, at which times, even in warm weather, he was muffled and coated as though it were mid Winter. Even slight worry or annoyance produced emotional excitement.

On examination he was a tall thin man, his muscles were flabby and badly developed. His tongue was red at edges and tip, furred with enlarged ^{papillae} ~~papillae~~

~~under~~ ^{on} dorsum. Gums red and slightly spongy. His teeth were good. There was old standing granular pharyngitis with enlarged capillaries.

The Abdominal walls felt thin and non-resistant to palpation. The liver and spleen were normal. The stomach was dilated. The transverse colon also was dilated and assumed a somewhat V shaped outline. All along the line of the colon much gurgling could be produced by pressure. There was no evidence of malignant growth any where.

Within a week after the first examination he was again seen during an attack of severe colic. His pulse was 76. Temperature normal. Great Superficial tenderness all over the abdomen. On the right side when steady palpation was permitted the ascending colon could be felt contracted and hard. He had vomited and his bowels were constipated. He was given $\frac{1}{4}$ of a grain of morphia hypodermically, followed by an enema which brought away some scybala and much tough mucus. When seen again in eight hours there was no sign of the contracted colon.

The membranes passed were examined by microscope and always showed the usual constituents viz, mucus, epithelial cells and abundant micro-organisms

The acute attacks of colic at this time occurred about every 7-10 days and were always worse if there was constipation.

The first treatment adopted was that he was ordered a diet to produce little faecal residue, soups, strong beef tea, fish and tender meat finely minced, bread, no fruit, no vegetables which contained cellulose. He was to have intestinal lavage daily for three weeks, massage was to be given for half an hour every 2nd day, this however he soon refused as he said it hurt him. Under the above treatment, his intestinal symptoms improved, he had no colic and did not pass any membranes though there were still signs of mucus. His general state was no better. He gave up all treatment for a month or six weeks, when he again underwent a similar course of treatment with a similar improvement in the signs of the catarrh. Several weeks later he had another relapse, when the treatment was altered. He was ordered rest in bed, a full ordinary diet with plenty of vegetable, butter, cream and other fats. A hot water bottle to be applied over the abdomen after meals. Massage for half an hour daily, 1 pint of Olive oil by Enema every 2nd night. As usual he was kept in bed for the 1st week. The diet gave very little trouble. The bowels acted regularly from the 1st.

At the end of a month he was quite comfortable and had gained weight, but there was the same failure to produce much improvement in the neurasthenia. He was a very difficult patient to manage as he would not carry out any treatment if it gave him any discomfort. At the present time he is not troubled with colic or other abdominal pain and expresses himself as feeling more comfortable than he has done for 2 years: but he is still a ^{fixed} ~~confined~~ invalid from Neurasthenia. He is taking 1 ^{drachm} of tincture of Hydrastis twice daily. His diet ^{is} ~~is~~ not in any way restricted. The case is interesting from the fact that in it the neurasthenia signs preceded the catarrh of the colon. It also illustrates the fact that in these cases when severe Neurasthenia is present, the prognosis is not favourable.

Single
Case 7. A ~~Simple~~ woman aged 48 years a cook.

She was a slightly built, thin and delicate looking woman with an anxious expression of face. She brought a written statement of her symptoms, which set forth that 5 years previously she had an acute attack of illness which she was told was Peritonitis. Two years later she began to have obstinate constipation followed later by pain and aching in the left groin, whilst her motions consisted of small hard

pieces covered with stringy masses of jelly. She had tried aperients of nearly every kind but had found

them all unsatisfactory as their use was followed by a feeling of grasping and tightness in the bowels.

Ordinarily she had ^{to use} ~~use~~ ^{for} enemata ^a relief of constipation. She had been in Stockport Hospital for two months where she was given enemata of olive and these she considered the best. She had been in the habit of taking 10 drops of nepenthe. On examination she was very thin, hardly any subcutaneous fat.

The skin of the abdomen hung in loose folds, the muscles were thin and the lower part of the walls were

pendulous. The liver and stomach were apparently

normal. There was ^{no} ~~was~~ evidence of a solid tumour

either by external or internal manipulation. As a rule there were no definite signs to be felt in the colon but when she had attacks of pain the sigmoid could be felt

to grow tense and hard and then relax again under the hand. Her stools were frequently examined and found always to contain excess of tough stringy mucus, at

intervals large flakes and patches were present.

Treatment ^{She} As wished to remain at work and could not carry out any extensive treatment, she was ordered

to take a diet from which fruit, vegetables, and pastry the harder portions of meat and fats were excluded.

She was prescribed ten grains of salicylate of soda thrice daily, and a pill of $\frac{1}{4}$ grain Extract of *Bella donna* every second night, also to use an enema of one pint olive oil injected by long tube when required. This she carried out for 5 weeks without improvement. Then one drachm of tincture of *hydrastis* was substituted for the salicylate.

This drug she considered gave her much relief, after taking it for 10 days, she said that she had lost all pain and all tenderness on pressure, and that the discharge of membrane had stopped. This good effect appears to have lasted for four months during which she improved in general health, but after that it gradually wore off- then she was given a

Compound mixture containing one drachm doses composed of syrup of *hypophosphites*, thrice daily, but it had to be stopped as constipation and pains followed its use. in fact it was found that all preparations of iron disagreed with her. As she had not definitely improved at the end of 5 months she gave up work and went home for treatment which consisted of rest in bed for a week, the modified Vom Noorden diet with application of hot water bag to stomach after food.

During the second week exercise was begun and and a sister was taught to rub the abdomen with

with olive oil in the course of the colon as massage could not be carried out. Constipation was treated by olive oil enema to be retained as long as possible. This plan was carried out for six weeks, and was rapidly successful. By the end of the second week, the pain and tenderness had disappeared and the mucus had gone before the end of the third week. She put on flesh rapidly, and gained in all 12 pounds. She has now remained well up to the present which is eight months from stopping treatment.

Case VIII was that of a Woman aged 38 years no occupation. Her mother had been subject for years to "Rheumatic pains" in her joints: had had much trouble especially with one knee. The patient had never had rheumatic fever but was subject to lumbago and to painful conditions of her joints. She had Heberdens nodes in both index fingers. She had always been of an excitable disposition, and was subject to great fits of depression which she usually culminated in a severe headache. She presented all the usual signs, and gave the usual history of mucous-membranous colitis. She had passed mucus to her knowledge at irregular intervals for 2 years. She was emaciated but could ^{not} say how much weight she had lost.

The treatment adopted was 1st rest in bed

for 1st week of treatment, 2nd, the modified von Noorden dietary which had to be introduced gradually owing to digestive disturbances. 3rd hot application to ~~the~~ abdomen after food, 4th Clyster of olive oil every second day ~~till~~ the bowels acted. 5 Massage daily for half an hour.

There was some trouble at first over indigestion and constipation, the latter did not disappear till 9 days after commencing treatment after which she began rapidly to recover, All pain and constipation had disappeared at the end of the second week. ~~The~~ Mucus was not passed at all after the 5th week of treatment by which time she was able to take regular exercise and had gained much strength. She was perfectly well one year after treatment when she was still keeping up the dietetic treatment.

Case LX. A man aged 25 years, a clerk, family history showed that his father died of Phthisis aged 31 years his mother had been subject to rheumatism. He had never had any form of rheumatism himself. Had always led a sedentary life and always been subject to constipation. Had always been of a gloomy reserved disposition. His history was interesting in that he had been told by his medical man, three years previously, to examine his stools for mucus, and that he had ^{not} discovered any till two months later when after a bad attack

of pain he parted with some membranes. For $1\frac{1}{2}$ years before he began to pass membranes he was typically neurasthenic, had latterly given up all work. After an ineffectual attempt at treatment in his own house, he went into a Nursing Home where he was given a plan exactly similar to that used in case 8. The immediate results were satisfactory and he went home at the 4 weeks end having lost all symptoms and having gained in strength. The after results were not so good, as owing to obstinate constipation he began to pass mucus again at the end of two months. By dieting however and the use of small doses of Liq-Extract of Cascara Sagrada combined with Succus Bella donnae he again recovered. The nett gain in this case is that he has no pain and is able to follow his occupation. He represents a class however, for which the prognosis in muco-membranous colitis is most unfavourable namely the neurasthenic man.

In addition to these I have treated 3 other cases of women aged 33, 37, 37 years respectively, at home under the care of a skilled nurse. They have all been typical cases and have been treated on the same plan as Case 8. In addition during the process of convalescence, they have taken tincture of hydrastis, 1 drachm three times daily, the results have

all been satisfactory so far as they have gone as they have remained well for a period of 5 to 2 months from time of leaving off regular treatment. In them however, the prognosis from the first was good as the disease was of less than 2 years standing. It is too early yet to judge as to the possibility of relapse. relapse. At least 6 months should elapse without a return in every case before the result may be considered satisfactory.

Case XII is not so typical of this disease, but I wish to put it on record as an example of a form in which all the symptoms were intermittent. It was that of a woman of 30, a telephone operator. She had rheumatic fever 4 years previously, was a slight woman of nervous temperament. In the spring of 1902 she had an attack of severe abdominal pain and passed she says at least a cup full of greyish white skins, these symptoms lasted 4-5 days after which she rapidly got well and felt quite comfortable. Again in August 1901 she had a similar attack and in March 1902 a third. These attacks she thought were all due to exposure to wet weather and getting her feet wet. They had all come on suddenly and had been followed by complete recovery, as far as symptoms were concerned. I saw her in October 1903: she was

then in bed, had severe pain, and tenderness in the abdomen, the tenderness not being confined to any ^{particular} ~~particular~~ locality. In fact her symptoms were those of peritonitis except ~~that~~ her temperature was ~~ab~~normal and her pulse slow, 58 per minute. ~~10~~ grain of ^u sulphate of morphia was given ^{hypodermically} ~~hypodermically~~ followed by an enema of olive oil which ^{she} was instructed to retain. In 5 hours the bowels acted and she passed considerable quantity of small hard faeculent masses which were covered with tough membrane, there being in addition, considerable quantities of membrane.

She was kept in bed for a week, a milk diet given, and for medicine gr x of Salicylate of Soda four times daily. In a week she was quite convalescent. She was then gradually put on a full ordinary diet with plenty of fruit, butter and new milk. She continued to take salicylate mixture for 8 weeks after which it was suspended and for three weeks she took no medicine. ^{After which} Salol gr 5 three times daily ^{was given}. This she took for yet another 4 weeks. She had remained quite well in the meanwhile, and has had no attack since.

It is not claimed that the modified dietary which I have set forth is in any way an original one. In the first place tried the food plan as described

by Von Noord^{en} (see his work Membranous Colitis

page 53) but found it was repugnant to the patients so modified my treatment to what is practically an ordinary diet with plenty of fat in the form of butter and cream and with all varieties of fruit and vegetables.

The results of treatment have been on the whole satisfactory but success has not been attained anything ~~as~~ like so rapidly as Von Noord^{en} claims in his cases, for he says (L. C.) that the bowels begin to act ^{regularly} ~~rapidly~~ by the 2nd or 4th day, whilst in my experience it is rare to get the result before the 9th or 10th day.

I believe contrary to what is usually thought that a full course dietary is better than one of rich soups, beef extracts and minced fine fibred meats, and from which fats, vegetables and fruits are excluded. It ^{is} ~~is~~ ^{true} ~~time~~ that the symptoms are improved under the latter plan, but it leaves the constipation unaltered, and the cure of constipation, ^{by} ~~by~~ which I mean the ^{to} ~~obtaining~~ of a sufficient regular evacuation of the bowels without artificial aid, is an essential factor to the success.

The more I see of these cases the more I am convinced of the necessity of carrying out ^a definitely planned regimen. In the severer cases they cannot be trusted to carry out the treatment themselves.

Those who can afford it should have skilled nursing either at their own homes or in a nursing establishment, whilst those who cannot pay for such treatment ought to be in Hospital.